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DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. Stanton/Cool (41)

PRODUCT NAME(S) Various Malathion Products

COMPANY NAME California Dept. of Food and Agriculture

SUBMISSION PURPOSE Section 18 - Review CDFA's Proposed
Amendments to Label

SHAUGHNESSEY NO.	CHEMICAL AND FORMULATION	% A.I.
_____	<u>Malathion</u>	_____
_____	_____	_____
_____	_____	_____



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

TO: Susan Stanton
Insecticide - Rodenticide Branch
Registration Division

FROM: James Akerman, Chief
Ecological Effects Branch
Environmental Fate and Effects Division

SUBJECT: California's Requested Amendments To Section 18 Exemption

California Department of Food and Agriculture (CDFA) has proposed several amendments to the Section 18 exemption allowing the use of malathion to control exotic fruit flies. One of these amendments, a request to eliminate crop restrictions, was reviewed by the Ecological Effects Branch (EEB) and our analysis was returned to you on July 11, 1990. The additional amendments will be the subject of this memorandum.

Amendment 1 - Addition of three formulated products.

CDFA has proposed the use of three malathion products in addition to the five previously approved. EEB is concerned because one of these products, Clean Crop Malathion 55 Insecticide Premium Grade (EPA Reg. No. 34704-3), contains a substantial quantity of a solvent that could prove toxic to nontarget aquatic species. There are other products, from the same manufacture and already approved, which contain less solvent and which should, as a result, pose less of a threat to fish and aquatic invertebrates.

Amendment 2, Part A - Removal of specific bait requirements.

Currently, the Section 18 authorization specifies that the bait should be Staley's Protein Bait, NuLure or other similar bait material. The amended label allows protein bait hydrolase or similar substance. EEB concurs with this change.

Amendment 2, Part B - To make dilution with water optional for all uses except aerial application over urban areas.

The current label requires dilution with 39.9 gallons of water per acre for ground application and a maximum of 2.9 gallons of water per acre for aerial application. The proposed amendment makes

dilution with water optional except that no dilution is permitted for aerial application over urban areas. This change should not impact on nontarget species and EEB concurs with the request.

Amendment 3, Part A - To allow ground application to be followed within 24-96 hours by aerial application.

EEB has strong reservations about this proposed amendment. Currently, applications may take place at seven-day intervals and the proposed change would be expected to increase significantly the exposure of nontarget species. In monitoring studies conducted during 1981-82, California Department of Fish and Game (CDFG) documented fish kills resulting from the use of malathion for control of the medfly. The proposed amendment could only exacerbate this problem.

Amendment 3, Part B - To shorten the time interval between applications to six days.

EEB has strong reservations about this proposal. Malathion has an aquatic half-life of approximately five days. In the CDFG monitoring program, direct application of malathion to inland streams resulted in mean concentrations of 10.3 ppb. The highest measured concentration was 157 ppb. These levels are significantly above the LC50 for warm water fish and aquatic invertebrates. Decreasing the interval between applications could only serve to increase the threat to nontarget organisms.

Amendment 3, Part C - To allow retreatment if the application cycle is interrupted.

CDFA wishes to allow retreatment of an entire zone if initial treatment is interrupted due to breakdowns or other factors. It is easy to imagine a situation in which a mechanical problem occurs after a substantial portion of a zone has been treated. If the entire zone is retreated, the net effect would be that some areas would receive two treatments in a short period of time. As discussed above, this would greatly increase the potential impact to nontarget species. EEB opposes this proposed modification of the existing Section 18.

Amendment 4 - Shorten the preharvest interval.

This proposed amendment does not fall within the purview of EEB.

Amendment 5, Part A - Remove the statement limiting aerial application to late evening and early morning when possible.

The protection of honeybees is the reason that this restriction was placed on the label initially. There is substantial documentation in the entomological literature of the toxicity of malathion to this species. Eliminating the requirement for aerial application to occur when bees are not working would be expected

to have a great impact on honeybees. EEB is opposed to this change in the label.

Amendment 5, Part B - Allow application in urban areas with mist blowers and hydraulic spray rigs.

Application by mist blowers and hydraulic spray rigs would be expected to result in more drift than would application by ground equipment but less than would occur from aerial spraying. Reduced drift should result in less adverse impact to nontarget aquatic species. EEB concurs with this proposed change.

Amendment 5, Part C - Remove requirement to collect residue data for establishment of tolerances for commodities.

This is out of the purview of EEB.

If you have questions about this memorandum, please contact Clyde Houseknecht at 557-4372.